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8. The tamping machine as claimed in claim 5, wherein the piston guide is produced from plastic in one piece together with at least one damping bush.

REMARKS

1. Omission of Drawings

In the Office Action, the Examiner states that the application admits of illustration by a drawing to facilitate understanding of the invention. The Examiner requires that applicant furnish a drawing illustrating the invention that does not include any new matter.

Applicant respectfully traverses the Examiner's requirement because the application contains two drawings on two sheets. The drawings were originally submitted with the international application and were transmitted to the U.S. Elected Office from the International Bureau. A form PCT/IB/338, dated April 4, 2000, confirmed submission of the application, including the drawings, to the U.S. Elected Office. Receipt of the international application was confirmed in the Notice of Acceptance, dated January 8, 2001. No separate copy of the drawings need be filed upon filing of the national phase filing papers. (See MPEP §1893.01(d)(1) and 1893.03(f)). However, as a courtesy, applicant is forwarding a copy of the drawings from the international application under cover of a letter that identifies the drawings as such to the Official Draftsperson.

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2. Objections to Claims

In the Office Action, the Examiner also objects to the claims because they allegedly include reference characters which are allegedly not illustrated in a drawing. Applicant respectfully traverses the Examiner's objection because the reference characters in the claims were deleted in the preliminary amendment filed with the application and received prior to mailing of the Notification of Acceptance. Moreover, as stated previously, drawings were transmitted to the U.S. Elected Office by the International Bureau and, accordingly, *are* part of this national phase application. The reference characters objected to by the Examiner are illustrated in those drawings. As a result, applicant respectfully requests that the Examiner withdraw the objection to the claims.

In addition, claims 1 and 4 have been amended, without changing their scope, to place them into better conformance with preferred USPTO practice.

3. Rejections Under 35 USC §103(a)

Turning now to the rejections of record, in the Office Action the Examiner has rejected claims 1 and 2 under 35 USC §103(a) as being unpatentable over Linz U.S. Patent No. 3,756,735 in view of Darda U.S. Patent No. 3,957,309.

Applicant respectfully traverses the Examiner's rejections of claims 1 and 2 based on the Linz and Darda patents. More specifically, the invention as recited in claim 1 is a tamping machine in which vibrations of the upper mass are reduced or avoided by damping the vibrations as soon as they occur. This object is accomplished by providing a

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tamping machine in which one or more linearly movable components of the crank mechanism of the device, namely the connecting rod, the guide piston or the piston guide, has a density lower than that of steel. By minimizing the weight of the linearly movable structural element, the vibrations of the upper mass can be reduced to a great extent. The Examiner admits that Linz, though disclosing a tamper that is generally of the claimed type, lacks a crank mechanism having a linearly movable element formed from a material having a lower density than steel.

The Examiner recognizes the deficiency of Linz and attempts to cure this deficiency by combining Linz with Darda. However, Darda would not have suggested modifying Linz to produce the claimed invention because Darda relates to a different type of device and makes different components from a lower density material than steel for a different reason that is not applicable to Linz.

Specifically, Darda discloses an apparatus for mechanically breaking up rock. The apparatus breaks rocks by urging a number of pressure cheeks outwardly into engagement with a rock surface to splinter and crack the rock. The cheeks are urged outwardly by engagement with a slider wedge that is driven downwardly between the cheeks by a piston of a piston-cylinder assembly. However, the Darda patent rock breaking apparatus does not include an oscillating working mass as required by claim 1. Nor does the piston-cylinder assembly linearly reciprocate in the same manner as a crank mechanism of a tamping machine. Therefore, unlike with a tamping machine of the claimed type, nothing in Darda generates vibrations in the apparatus which need to be damped. Further, while Darda forms the piston and cylinder of its piston-cylinder

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assembly of a material having a density lower than steel, the only apparent purpose for this construction is to reduce the overall weight of the apparatus. (see Col. 7, lines 45-48). There is no indication in Darda that weight reduction *per se* would be of a concern in a tamping implement of the type disclosed in Linz. Even if Darda were to provide a *general* teaching of the desirability of reducing weight in any hand-operated tool by reducing the weight of a piston-cylinder assembly (which it does not), Linz lacks a piston-cylinder assembly, and it is therefore unclear from Darda's teachings as to which, if any, components of Linz should be made from aluminum to obtain this result. There is certainly no suggestion to form any of the specified linearly reciprocating components from such a material. Hence, the overall weight reduction accomplished in the rock breaking machine disclosed in the Darda patent by forming a piston-cylinder assembly of aluminum does not suggest that weight reduction in one or more of the specified linearly reciprocated parts of a tamping machine will lessen the vibrations created by the tamping machine, as covered by the invention of claims 1 and 2.

In short, because the subject matter of claim 1, and claim 2 which depends from claim 1, is neither shown nor suggested by the combination of the Linz and Darda patents, applicant believes that claims 1 and 2 are allowable. As a result, applicant respectfully requests that the Examiner withdraw the rejections to claims 1 and 2.

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The Examiner has also rejected claims 3/1, 3/2¹ and 4 under 35 USC § 103(a) as being unpatentable over the Linz and Darda patents, and further in view of Pauliukonis U.S. Patent 3,703,125.

Applicant respectfully traverses the Examiner's rejections of claims 3 and 4 based on the Linz, Darda and Pauliukonis patents. More specifically, claims 3 and 4 ultimately depend from independent claim 1 which, based on the above arguments, is believed to be allowable. Therefore, claims 3 and 4 are also believed allowable.

Furthermore, the Pauliukonis patent discloses a rather generic piston and cylinder assembly having an all-plastic construction including an intricately molded end closure member. The Pauliukonis patent does not disclose any particular use for the cylinder assembly and, more importantly, does not disclose a piston rod of the type employed by the claimed invention or Linz (Linz lacks a hydraulic or pneumatic piston of the type disclosed in Pauliukonis). Nor does Pauliukonis disclose or even suggest that the use of any linearly movable components in a tamping machine would effectively reduce or eliminate the vibrations created in a machine having an oscillating mechanism, such as a tamping machine, as accomplished by the tamping machine construction of the claims. Therefore, a person of ordinary skill in the art would not have gained any advantageous knowledge from the Pauliukonis patent for constructing a tamping machine in order to reduce the vibrations typically created by tamping machines as accomplished by the machine covered by claims 3 and 4. Applicant therefore believes that the subject matter of claims 3 and 4 is neither shown nor suggested by the combination of the Linz, Darda

¹ The Examiner's reference to claims 3/1 and 3/2 fails to acknowledge entry of the preliminary amendment of March 9, 2000, in which the multiple dependencies referenced by the Examiner were eliminated.

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and Pauliukonis patents. As a result, applicant respectfully requests that the Examiner withdraw the rejections to claims 3 and 4.

4. New Claims and Conclusion

New claims 5-8 are commensurate in scope with claims 1-4 and are presented in even better conformance with preferred USPTO practice. These claims are allowable for at least generally the same reasons described above. A Notice of Allowance is therefore respectfully requested.

No fees are believed to be payable with this communication. Nevertheless, should the Examiner consider any other fees to be payment in conjunction with this or any future communications, the Director is authorized to direct payment of such fees to Deposit Account No. 50-1170.

In view of the foregoing remarks, the application is believed to be in *prima facie* condition for allowance, and such action is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,


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MARKED-UP VERSION SHOWING CHANGES MADE

Amended Claims

1. (Twice Amended) A tamping machine for soil compaction, comprising with a working mass which is driven in a tamping manner and which can be driven linearly back and forth, via a crank mechanism and a spring assembly, by a motor belonging to an upper mass, wherein the crank mechanism has at least one structural element which is moveable linearly back and forth and which ~~is~~ can be produced from a material, the density of which is lower than that of steel, and wherein the structural element which is moveable linearly back and forth is a structural element from the group comprising a connecting rod, a piston pin, a guide piston, and a piston guide.

4. (Twice Amended) The tamping machine as claimed in claim 1, wherein the piston guide ~~is~~ can be produced from plastic in one piece together with at least one damping bush.

PATENT COOPERATION TREATY

PCT
NOTIFICATION OF TRANSMITTAL
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EXAMINATION REPORT
(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

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 Müller & Hoffmann MÜLLER & HOFFMANN
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Applicant WACKER-WERKE GMBH & CO. KG et al	

IMPORTANT NOTIFICATION**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

JP,US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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